#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

### (19) World Intellectual Property **Organization** International Bureau



## 

#### (43) International Publication Date 29 April 2004 (29.04.2004)

# (10) International Publication Number

(51) International Patent Classification7:

C12Q 1/48

WO 2004/035815 A1

(21) International Application Number:

PCT/EP2003/011554

(22) International Filing Date: 17 October 2003 (17.10.2003)

(25) Filing Language:

**English** 

(26) Publication Language:

English

(30) Priority Data:

0224338.4

18 October 2002 (18.10.2002) GB

60/497,227 22 August 2003 (22.08.2003)

- (71) Applicant (for all designated States except US): NOVAR-TIS FORSCHUNGSSTIFTUNG, ZWEIGNIEDER-LASSUNG FRIEDRICH MIESCHER INSTITUTE FOR BIOMEDICAL RESEARCH [CH/CH]; Maulbeerstrasse 66, CH-4058 Basel (CH).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): FRIGERIO, Francesca [IT/CH]; Amerbachstrasse 53, CH-4058 (CH). FUMAGALLI, Stefano ITT/CHI: Wettsteinallee 93, CH-4058 Basel (CH). KOZMA, Sara, C. [BE/FR]; 16, Rue des Pins, F-68220 Hésingue (FR). STICKER-JANTSCHEFF, Melanie [DE/DE]; Stuttgarterstrasse 11, 79211 Denzlingen (DE). THOMAS, George [US/FR]; 16, rue des Pins, F-68220 Hésingue (FR). UM, Sung, Hee [KR/CH]; Schönaustrasse 67, CH-4058 Basel (CH).

- **NOVARTIS** (74) Common Representative: ZWEIGNIEDERLAS-FORSCHUNGSSTIFTUNG, SUNG FRIEDRICH MIESCHER INSTITUTE FOR BIOMEDICAL RESEARCH; Maulbeerstrasse 66, CH-4058 Basel (CH).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MODULATION OF S6 KINASE ACTIVITY FOR THE TREATMENT OF OBESTIY

(57) Abstract: This invention provides screening methods for agents effective in treating obestiy through specific inhibition of S6 kinase 1 activity. Also provided are methods of treating obesity by administering an effective amount of an inhibitor specific for S6 kinase 1.